

Updated: June 2008

“Keep Your Brain Active” Mental Exercise and Dementia

Exercising the brain is an important, enjoyable part of everyday life for everyone. It has a part to play in a positive, healthy lifestyle in the same way as physical exercise. Stimulating leisure and social activities are also thought to be important in maintaining a healthy brain.

In recent years there has been considerable interest in researching the role that mental exercise may play in reducing the risk of developing Alzheimer's disease or vascular dementia and for the benefits it offers to people with dementia.

This Update Sheet outlines the part that exercising the brain can play in promoting a healthy lifestyle and its potential to reduce the risk of dementia. It should also be read with the following:

Update Sheet No 3: *Treating Alzheimer's Disease and Vascular Dementia: The Use of Other Therapeutic Approaches*

Update Sheet No 9: *Keep on Moving: Physical Exercise and Dementia*

Update Sheet No 11: *What you Eat and Drink and your Brain*

Booklet: *Mind your Mind – a user's guide to dementia risk reduction*

Paper No 13: *Dementia Risk Reduction: The Evidence*

Exercising the brain may reduce the risk of dementia

Keeping the brain active is thought to build reserves of healthy brain cells and connections between them. The role that exercising the brain may play in reducing the risk of developing Alzheimer's disease and other forms of dementia has therefore been the subject of considerable research.

Numerous studies have shown that engaging in more mentally stimulating activities throughout life is associated with a reduced risk of developing dementia. Studies of large groups of people have shown that those who achieve higher levels of education, have more mentally demanding occupations, or participate in higher numbers of mentally stimulating leisure activities have around a 50% lower risk of developing dementia.

Activity that exercises the brain may build brain reserve that helps to compensate for damage caused by Alzheimer's or other diseases and so delay the onset of dementia. However, some recent research suggests that for those who have been more mentally active who do go on to develop dementia, their mental abilities and memory may decline faster than those who were less likely to engage in such mental activity.

What brain exercises?

Mental exercise can and should be a very enjoyable part of life. Almost any type of mental activity may be beneficial, but they should be reasonably complex, varied and interesting, and engaged in frequently.

Some activities that involve exercise for the brain, and have also been

associated with reduced dementia risk as part of a mentally active lifestyle, are:

- Reading
- Listening to the radio
- Visiting museums
- Board games
- Crosswords
- Sudoku and other puzzles
- Learning a new language
- Playing musical instruments
- Participation in leisure activities such as sports, hobbies, dancing, gardening, groups, cultural activities and conversation

Many of these activities involve social interaction and physical activity as well. Recent research suggests that combining mental, social and physical components in leisure activities offers the greatest benefit in terms of reducing dementia risk.

While exercising the brain has not been proven to prevent dementia, it may reduce the risk or delay the onset of dementia, and the general health benefits of these activities are well established.

Exercising the brain for people with Alzheimer's disease and dementia

Research has also looked into how exercising the brain can improve the thinking capacity of people with dementia or slow the rate of mental decline, and how exercising the brain can contribute to an enhanced lifestyle for people with dementia and their families and carers.

Some studies have shown positive results. However, the role that exercising the brain can play in dealing with memory and other problems associated with dementia, and the extent of any reduction in mental decline, is still under study.

Generally, people will feel better if they are actively involved in interesting activities. Exercise of the brain, together with physical exercise and social participation certainly offer a prescription for a better quality of life.

What brain exercises for people with dementia?

People in the early stages of dementia may choose from a range of brain exercises such as those listed above. People in later stages of dementia may enjoy simpler exercises that relate to their own interests and capabilities. Such exercises could include:

- Doing simple calculations
- Reading aloud from books
- Storytelling, including brief stories and role playing in longer stories, to help increase attention and participation and to stimulate emotions and memories
- Imagery exercises to stimulate the senses, such as recalling a peaceful nature scene
- Dancing
- Playing musical instruments

Keeping involved and active in the things they enjoy is extremely important for people with dementia. Rather than giving up activities that are becoming difficult, it may be possible to modify the activity or break it down into manageable parts. Avoid choosing activities that are beyond the person's capabilities as this may result in frustration and a sense of failure.

There may also be an opportunity to try something new, such as a new hobby or creative pursuit, that may be enjoyed and contribute to mental stimulation.

Interaction with other people, social participation and communication may be as important for the person with dementia as any direct benefits from

mental activity itself.

The importance of reducing stress

It is important for everyone to try and reduce stress as much as possible. Excessive stress can result in reduced memory capacity, as well as adverse physical responses such as poor sleep. For people with dementia, avoiding doing more than they can cope with or more than one thing at a time can help prevent stress.

Both physical and mental exercise are very good ways of dealing with stress and with its accompanying effects. Using the brain to undertake challenging tasks may remove attention from some of the causes of stress.

More research is needed

Research into the causes, risk reduction and treatment of dementia is ongoing and more such studies are needed. More research is being done to better understand the mechanisms of the link between mental exercise and reduced dementia risk. In the meantime, regular mentally stimulating activities are recommended to help keep the ageing brain functioning well and reduce cognitive decline.

Research shows that there are factors in health and lifestyle that indicate greater risk of developing dementia. While you may reduce that risk with physical exercise, mental exercise and improved diet, these activities do not guarantee prevention of dementia.

This Update Sheet is provided for your information only, and does not represent an endorsement of any treatment by Alzheimer's Australia.

Suggested further reading

Think or Sink. An article reprinted from The Weekend Australian Magazine, December 2-3, 2006. Available from the Alzheimer's Australia website at <http://www.alzheimers.org.au/upload/ThinkSink.pdf>

Further Information

A range of books, videos, Help Sheets and Update Sheets are available through Alzheimer's Australia in your State or Territory by contacting the National Dementia Helpline on 1800 100 500.

Help Sheets and Update Sheets, including any more recent information, can also be obtained on the internet at www.alzheimers.org.au